



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/572,747

03/21/2006

Kouichi Noguchi

NOGU3002/GAL

3332

23364 7590 12/23/2009

BACON & THOMAS, PLLC
625 SLATERS LANE
FOURTH FLOOR
ALEXANDRIA, VA 22314-1176

EXAMINER

HENKEL, DANIELLE B

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

12/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,747	Applicant(s) NOGUCHI ET AL.	
	Examiner DANIELLE HENKEL	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed September 9, 2009 has been entered and fully considered.
2. Claims 1 and 3-5 remain pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 1797

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over KANEGASAKI (2003) in view of KITAGAWA (US 4629862).

a. With respect to claim 1, KANEGASAKI discloses a cell observation chamber comprising a dish-shaped bottom support body with a window for observing the movement of cells provided in the center of a bottom part thereof; a glass substrate adapted to be placed on a bottom surface of said bottom support body; a dish-shaped intermediate support body with an opening formed in the center of a bottom part thereof, said intermediate support body being adapted to be attached to said bottom support body to press and fix said glass substrate from above onto the bottom surface of said bottom support body; a substrate with a plurality of through holes for guiding cell suspension containing solution chemotactic factor containing solution therethrough, said substrate being adapted to be fixed onto a surface in the central part of said glass substrate, said substrate having at least a pair of wells and a flow path for fluid communication between said wells formed in a surface facing said glass substrate; a packing member with a plurality of through holes for guiding said cell suspension containing solution and said chemotactic factor containing solution therethrough, said packing member being adapted to be fitted into said opening portion that is formed in the center of the bottom part of said intermediate support body to press said substrate from above; a dish-shaped cover block body with a plurality of

Art Unit: 1797

through holes for guiding said cell suspension containing solution and said chemotactic factor containing solution therethrough formed in the center of the bottom part thereof, said cover block body being adapted to be attached to said bottom support body with said intermediate support body attached thereto to press and fix said substrate from above onto said glass substrate through said packing member (Sections 2.1, 2.2, 2.5 and Figure 1). KANEGASAKI does not explicitly disclose a solution temperature control device. However, KITAGAWA discloses a cell observation chamber and a solution temperature control device comprising a temperature sensor with a temperature sensing part immersed in a solution within said cell observation chamber to directly measure the temperature of solutions filling the wells (Column 8, lines 2-6) and a first temperature controller controlling the temperature of the solutions to be a predetermined temperature with feedback (Column 3, lines 4-8) of the measured temperature (Column 8, line 17- Column 9, line 54; Figure 5 and 7). KITAGAWA also discloses a second temperature controller for measuring the temperature of a heating section external to the cell observation chamber (Column 8, lines 6-16) that heats the cell observation chamber from outside thereby indirectly heating the solutions filling the wells and for controlling the heating section (heater plate) to be a predetermined preheating temperature (Column 8, line 17-Column 9, line 45). At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the device of KANEGASAKI to include the solution temperature control device as taught by KITAGAWA because a more precise

Art Unit: 1797

temperature control is achieved in which the temperature controller controls the temperature of the sample so as to control the part of the sample to be at a present temperature (Column 9, lines 38-45, Column 3, lines 17-20).

b. With respect to claim 3, KITAGAWA discloses the temperature controller prevents the heating section from being overheated (controlled to preset temperature) (Column 9, lines 24-32).

c. With respect to claim 4, With respect to claim 1, KANEGASAKI discloses a cell observation chamber comprising a dish-shaped bottom support body with a window for observing the movement of cells provided in the center of the bottom part thereof; a glass substrate adapted to be placed on the bottom surface of said bottom support body; a dish-shaped intermediate support body with an opening portion formed in the center of the bottom part thereof, said intermediate support body being adapted to be attached to said bottom support body to press and fix said glass substrate from above onto the bottom surface of said bottom support body; a substrate with a plurality of through holes for guiding cell suspension containing solution and chemotactic factor containing solution therethrough, said substrate being adapted to be fixed onto the surface of a central part of said glass substrate, at least a pair of wells and a flow path for fluid communication between said wells formed in a surface facing said glass substrate; a packing member with a plurality of through holes for guiding said cell suspension containing solution and said chemotactic factor containing solution therethrough formed therein in a vertically penetrating manner, said packing

Art Unit: 1797

member being adapted to be fitted into said opening portion that is formed in the center of the bottom part of said intermediate support body to press said substrate from above; a dish-shaped cover block body with a plurality of through holes for guiding said cell suspension containing solution and said chemotactic factor containing solution therethrough formed in the center of the bottom part thereof, said cover block body being adapted to be attached to said bottom support body with said intermediate support body attached thereto to press and fix said substrate from above onto said glass substrate through said packing member (Sections 2.1, 2.2, 2.5 and Figure 1). KANEGASAKI does not explicitly disclose a solution temperature control device. However KITAGAWA discloses a temperature sensor for directly measuring the temperature of solutions filling a pair of wells (Figure 7, Column 9, lines 46-54), the temperature sensor being attached detachably to the cell observation chamber (microtest plate)(Column 9, lines 11-13), and having a temperature sensing part immersed in solution in a liquid storage chamber (cell) formed in the cell observation chamber in an isolated position where the solution therein is indirectly heated by the heating section equally with the solutions in a well (other cell) and where the liquid storage chamber is separate (different cell) and connected to wells (connected via plate) (Column 9, lines 46-54 and Figure 7). At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the device of KANEGASAKI to include the solution temperature control device as taught by KITAGAWA because a more precise temperature control is achieved in which

Art Unit: 1797

the temperature controller controls the temperature of the sample so as to control the part of the sample to be at a present temperature (Column 9, lines 38-45, Column 3, lines 17-20).

d. With respect to claim 5, KITAGAWA further discloses the first temperature controller maintains the solution filling the well at a predetermined (preset) temperature by controlling the external heating section (heater plate) with feedback of the measured temperature (Column 3, lines 4-8 and Column 8, line 17- Column 9).

Response to Arguments

5. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection over KITAGAWA (US 4629862).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 1797

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIELLE HENKEL whose telephone number is (571)270-5505. The examiner can normally be reached on Mon-Thur: 11am-8pm, Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Marcheschi can be reached on 571-272-1374. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIELLE HENKEL/
Examiner, Art Unit 1797

/William H. Beisner/
Primary Examiner, Art Unit 1797